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DEFENSE SYSTEMS MANAGEMENT COLLEGE



PROGRAM MANAGEMENT COURSE INDIVIDUAL STUDY PROGRAM

A CLASS-DESK'S GUIDE TO NAVAIR MANAGEMENT

STUDY PROJECT REPORT
PMC 77-1

Everett Alvarez, Jr.
Commander USN

FORT BELVOIR, VIRGINIA 22060

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Individual Study Program

Study Project Report

Prepared as a Formal Report

Defense Systems Management College

Program Management Course

Class 77-1

by

Everett Alvarez Jr.
Commander USN

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Study Project Advisor
Mr. William Cullin

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DEFENSE SYSTEMS MANAGEMENT COLLEGE

STUDY TITLE: A CLASS-DESK'S GUIDE TO NAVAIR MANAGEMENT

STUDY PROJECT GOALS:

1. To identify the organizational environment of the Naval Air Systems Command's Class-Desk Officer, and to document his functional responsibilities; and
2. To describe in a concise and logical manner how the Class-Desk performs his duties.

STUDY REPORT ABSTRACT:

The purpose of this report is to introduce the Naval Air Systems Command's Class-Desk Officer and to define his specific responsibilities in the Project Manager's organization. Containing a descriptive rundown of his duties, this report is also designed to provide a ready reference for the Class-Desk in carrying-out his daily tasks.

The report is drawn from a compendium of notes taken during interviews and discussions with current NAVAIR Class-Desks, as well as from a review of NAVAIR instructions pertinent to the Class-Desk responsibilities.

The report is written in a simplistic manner, containing many acronyms with which the reader is assumed to have familiarity, and the format is such that each section can be readily expanded on or modified by a Class-Desk in order to facilitate his own personal use.

SUBJECT DESCRIPTORS:

Naval Air Systems Command
NAVAIR Management
NAVAIR Project Management
NAVAIR's Class-Desk
Management Systems
Naval Aircraft

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EXECUTIVE SUMMARY

The Class-Desk Officer is a member of the Project Managers organizational structure as implemented in the Naval Air Systems Command Headquarters, Washington, D. C. His primary function is to serve as the technical coordinator for his program's technical needs. In performing his tasks, he is the Project Manager's leading coordinator with the NAVAIR in-house engineering divisions, and with external centers of expertise such as field engineering facilities, test sites, or even with the contractors themselves.

This report is designed to serve the Class-Desk as a general guide to NAVAIR management. It is structured as a view of the Systems Command's function from the Class-Desk's position. It begins with an introduction of the NAVAIR organizational environment, including a brief discussion of the major groups in NAVAIR, mainly the Deputy/Assistant Commanders for: Plans and Programs (AIR-01); Contracts (AIR-02); Research and Technology (AIR-03); Logistics and Fleet Support (AIR-04); Material Acquisition (AIR-05); and Test and Evaluation (AIR-06).

The following chapters focus on the specific groups in AIR-05 (the Material Acquisition Division) that are of prime interest to the Class-Desk. In particular, this paper discusses the functional centers of expertise with whom the Class-Desk becomes involved in carrying out his daily tasks, and the support they provide. Engineering and RDT&E field activities who provide services and support are also covered.

The second section of this report discusses the administrative details of the Class-Desk's job and how he performs his tasks. It covers

those functions that occupy most of his working day, notably correspondence, meetings, and reports, in moderate detail.

With respect to a Class-Desk's posture, the final chapters specifically delve into the important aspects of the Class-Desk's responsibilities, namely administrative and financial management. These involve the funding of work, assigning the work, and maintaining control of the work done through engineering changes (ECP's, RAMECS, and OSIP's).

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SECTION I

INTRODUCTION

The overall purpose of this report is to present the position of the NAVAL AIR SYSTEMS COMMAND's Class Desk, a member of the Project Manager's team. Also known as the Assistant Project Manager for Material Acquisition, he is the prime technical coordinator for the project's technical needs and with the Material Acquisition Division's functional centers of expertise.

Proposed as a guide to NAVAIR management from the Class-Desk's viewpoint, the goals of this paper are to document the Class-Desk's organizational environment; to identify his functional responsibilities and major problem areas; and to track through the proper channels for solutions.

This manual is organized into several sections for ready reference when needed. It contains information on most of the duties the Class-Desk is assigned and provides basic information on situations he is more than likely to encounter. It is written in simplistic terms, contains many acronyms with which the reader is assumed to be familiar, and refers to the governing instructions for detailed and official information concerning the various subjects.

This first section describes the chain-of-command, the NAVAIR organization, duties of various offices, the Class-Desk's duties in general and the interfaces he experiences, and some general information.

Chapter I

NAVAIR ORGANIZATION

I.1 General (Refer to NAVAIRINST 5400.1A)

The Naval Air Systems Command (see figure I-1) is one of several Systems Commands under the Chief of Naval Material, whose overall mission is to provide equipment and logistic support to the operational forces. The Chief of Naval Material, in turn, reports to the Chief of Naval Operations who, among his many functions, establishes the operational requirements for ships, aircraft, weapons, etc.

Simply stated, the mission of NAVAIR is to provide material support to fleet aviation, including responsibility for all aircraft and aircraft related systems, as well as ship and shore-based systems such as catapults, arresting gear, and the like, which support aircraft. The mission includes conceptualization of a system, its engineering design, the test and evaluation to determine its conformance with specifications, production, and engineering and supply throughout its fleet life span.

Besides the immediate office of the Commander of the Naval Air Systems Command (which includes the Vice-Commander), there are seven major groups and a Management/Administrative Directorate. (see figure I-2). In addition, a major component located within the headquarters, but organizationally separate, is the Project Management Officer, Air (PMOA).

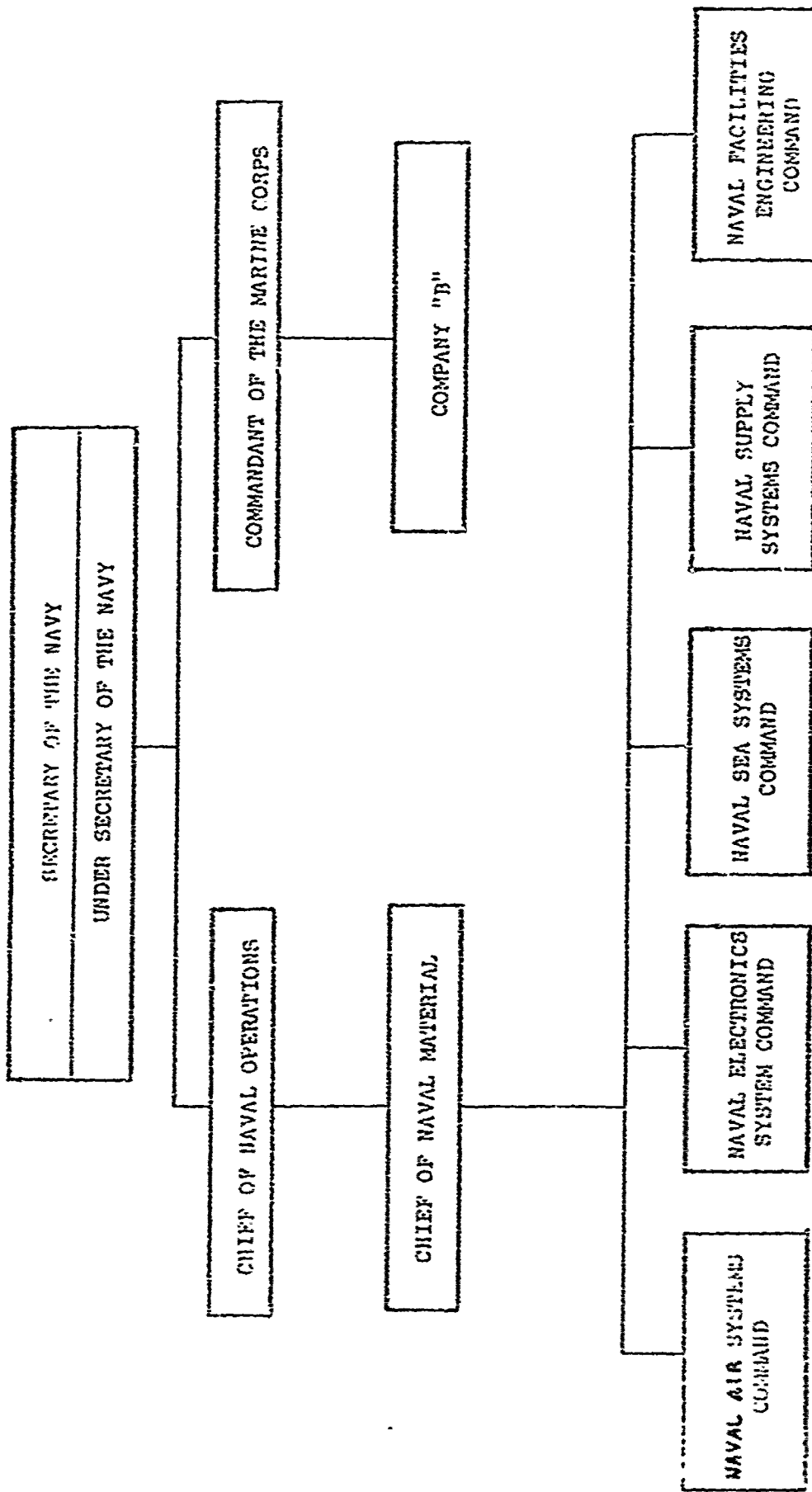


FIGURE I-1.

I.2 Deputy Commander for Plans and Programs (AIR-01)

AIR-01 is the principal group in the chain of command. It has the broad responsibilities for planning, project coordination, programming, determination of priorities, and other similar functions. AIR-01 is the first to acquire the requirement imposed by higher authority and to translate them into workload assessment and assignments for the rest of the command.

The offices in this group and their functions, with whom the Class-Desk is most likely to deal are:

AIR-101: Publish and maintain current the Weapon System Planning Documents (WSPD's) and other command Plans.

AIR-104: Provide overall administrative coordination of Project Management efforts, including the establishment of priorities for purposes of reprogramming funds from one project to another.

AIR-106: Establishes policy for configuration control; chairs and manages the Configuration Control Boards.

I.3 Assistant Commander for Contracts (AIR-02)

AIR-02 establishes procurement policy for NAVAIR. It is responsible for the letting of contracts with industry, converting a requirement into a legal document (contract) for the purchase of equipment and/or services. The Class-

Desks' principal connection with the group is the Aircraft Weapon System Purchase Division, but may also have contact with one of the other two purchase divisions---the Aircraft Components Purchase Division, or the Missile Weapon System Purchase Division.

I.4 Assistant Commander for Research and Technology (AIR-03)

Research and Development is considered to consist of six categories. The first three are Research, Exploratory Development, and Advanced Development; and these are principally dedicated toward the advancement of various technologies used in new systems. In NAVAIR, these three categories of R&D fall within the purview of AIR-03.

In addition, AIR-03 acts as the overall coordinator of R&D Planning, with responsibility and authority for re-programming funds, and also keeps abreast of foreign technology and intelligence information. In order to fulfill these responsibilities, AIR-03 consists of two general sub-groups as follows:

- (1) Technology Administrators - pursues programs which fall in their specific technology area, such as aerodynamics, structures and materials, propulsion, equipment and support, ordnance, etc.
- (2) Advanced Systems Directorate - deals with advanced systems concepts, integration of technology building blocks into proposed systems,

and the development of program objectives for how the new systems will look.

I.5 Assistant Commander for Logistics and Fleet Support (AIR-04)

This group is the principal contact in liaison with the fleet for such items as determining the quality of support, the need for NAVAIR action, and the solutions to fleet equipment problems. They have primary responsibility of reviewing 3-M reports to discover trends in performance. They conduct initial investigation into problems to determine if the cause is operational, maintenance, or design related. If it is of design origin, then they shift the emphasis to the Class-Desk for solution.

They are the managers of the workload for Naval Air Rework Facilities. They are also charged with lead responsibility for training equipment. The Class-Desk works closely with the counterpart in AIR-410, the Logistics Management Division, who is at an equal level on the Project Manager's team. He also deals with personnel in AIR-411, the Maintenance Policy and Engineering Division, in determining maintenance engineering requirements regarding design changes raised in solving problems with equipment in the fleet.

I.6 Assistant Commander for Material Acquisition (AIR-05)

The largest of NAVAIR's groups, AIR-05 is responsible

for the development, production, and delivery of aircraft, air-launched weapons and associated equipment, including ground support equipment. Included in the above are two of the three remaining categories of R&D; engineering development and operational development of systems. Involved in these are such functions as design approval, preparation of design data, test and evaluation (including qualification and service suitability testing) and quality control.

In order to accomplish this, the AIR-05 group consists of several staff divisions, a system coordinating division (AIR-510), and functional divisions. It should be noted that the Class-Desk is in AIR-510, the "coordinating" division, with responsibility for the work of the functional divisions as it relates to his peculiar program.

I.7 Assistant Commander for Test and Evaluation (AIR-06)

This new group was formed in response to the need for a centralized policy direction and command spokesman for test and evaluation matters. Besides initiation of policy, the group reviews workload assignments to field activities to ensure compliance with policy, conformance with activity missions, and a balance of workload and resources among assigned T&E field activities. They review and assist in preparing TEMPS (Test and Evaluation Master Plans) for NAVAIR projects. They also act as command sponsors (Planning Support Official) for assigned T&E activities, to ensure maintenance of technical capability and assignment of resources equitably.

AIR-06 exercises project managership over targets and range instrumentation projects. There are two principal decentralized groups:

- (1) AIR-06R, at Point MUGU, is concerned with targets and with range instrumentation projects for all Navy ranges.
- (2) AIR-06T, at Patuxent River, is concerned with test and evaluation projects and the provision of capabilities and resources for the field activities, a direct support function to AIR-06 for the responsibilities mentioned above.

I.8 Comptroller Group (AIR-08)

The Comptroller is the senior financial advisor in the command. He is responsible for the establishment of policy concerning financial management. The Comptroller's group relates program requirements into financial plans, prepares overall command budgets, and oversees accounting systems. They are the prime movers in cases where the reprogramming of funds from one project to another is required.

AIR-01, AIR-03, AIR-04, and AIR-05 are appropriation sponsors for various appropriation accounts, thus they exercise command-wide authority over their assigned funds. The Comptroller acts as a financial consultant and advisor to them in that function. In addition, when General Accounting Office or Navy Audit reports are received, AIR-08 personnel coordinate the replies. As AIR-08 is the "check-writer"

for NVAIR, the Class-Desk's involvement with this group is in getting his funds released, as by requisitions, work requests, and project orders.

I.9 Management and Administration Directorate (AIR-900)

This Directorate is responsible for management and administrative policy-setting and for operations of manpower management, military personnel, legislative affairs, support services, and numerous other command functions. Included is the Office of the Inspector General. The Class-Desk has little direct contact with this group, since most administrative affairs are handled by the various Group Administrative offices.

I.10 Project Management Office, Air (PMOA)

Established to provide an organizational group containing the Project Managers, the office is under the Commander, and is responsible to AIR-01 for coordination control.

Chapter II

FUNCTIONS AND RESPONSIBILITIES

II.1 General

This section is limited to more details of the specific groups that are of interest to the Class-Desk, that is, the AIR-05 group, the Project Manager, the Class-Desk itself, and the functional divisions. The following describes the command interfaces in order to show how the various groups work together.

II.2 The Material Acquisition Group (AIR-05) (See figure II-1)

As has been indicated, AIR-05 is responsible for the engineering aspects in development of aircraft and weapon systems, and for production, delivery, and engineering support of those systems. In order to fulfill that responsibility, NAVAIR employs its staffs, various field activities, and contractors to carry out the specific functions while retaining management responsibility within headquarters. The process is a complicated one, consisting of many functions which must be performed throughout the entire process. Some of AIR-05's functions are described as follows:

STUDIES: In the early phases of a program, studies cover the relative mission effectiveness of alternatives which have been proposed. These involve cost-effectiveness, performance trade-offs, applic-

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FIGURE II-1

ability of new technology, growth potential, and a myriad of other subjects.

TECHNICAL APPROACH DETERMINATIONS: These evolve from studies made on the subject, or from competitive proposals from industry. Determinations are made concerning the use of new methods, devices, materials, and a general approach to the design is decided upon.

SPECIFICATIONS: These are drawn up as key elements of a contract, or the requests for proposals leading to a contract. In addition to general aircraft specifications, they also include detailed performance, technical, and design requirements, and also data and demonstration requirements.

AIR-05 has the primary responsibility for the specifications, but these may be made up in-house, by the offering contractor, or a field activity.

PROCUREMENT REQUESTS: Generally initiated by the AIR-05 group, these are devices by which the operating groups indicate to the Contracts Group (AIR-02) what it is they want to purchase. These requests include specifications, data requirements, security requirements, citation of funds, and other details.

PROPOSAL EVALUATION: This is the process of reviewing competitive proposals from industry to determine which contractor is selected. Generally speaking, the AIR-05 group evaluates the proposals from a technical viewpoint, independently of the cost

proposals.

MONITORING AND APPROVING DESIGN: This is a continuing process to determine whether the design approach employed by the contractor is in consonance with his proposal and will meet specification requirements. This assessment of his technical progress is normally accomplished by review of various reports and drawings submitted in accordance with the contract data requirements list (CDRL) and other specification requirements.

MANAGING TEST AND EVALUATION: This includes the planning, assignment of tasks to the performing agencies, and review of reports for determination of implementation of recommendations. The scope of these tests are very broad, and they include contractor demonstrations, Navy Preliminary Evaluations CT&E, BIS trials, and others as may be required.

PLANNING AND EXECUTING MOCKUP INSPECTIONS: These include cockpit mockups, lighting mockups, and engineering proofing/production proofing kits. The inspections are made on representative layouts which consist of real or simulated instruments, controls, switches, and the like. They are to determine the workability of the design, the degree of attention to human factors, and the form-fit-function applicability of the design.

REQUESTING, PROCESSING, AND ENGINEERING APPROVAL OF CHANGES:

This function is AIR-05's responsibility to coordinate. Design changes can result from a number of reasons, ie, improvement of performance, correction of deficiencies, value engineering, and so forth. Overall configuration management requires the concerted efforts of AIR-04, AIR-05, and AIR-02 under a discipline established and run by AIR-01A6. However, the initiation and processing of changes through the system are functions performed by AIR-05.

ESTABLISH AND/OR MONITOR QUALITY CONTROL, RELIABILITY, MAINTAINABILITY AND SAFETY PROGRAMS: These are normally in compliance with instructions and for review of results and initiation of follow-up correction action. These programs are required as elements of development and production contracts, or they may be instituted as special programs in response to recurring problems in fleet operations, or other special requirements.

MONITOR PROGRESS IN PRODUCTION: This is a continuing process to determine compliance with contract schedules, through review of reports and contact with the Navy Plant Representatives.

II.3 Project Managers (PMA)

Individually chartered for designated projects by the Commander, NAVAIR, with the approval of Chief of Naval Material; Project Managers operate under the executive authority of the Commander, NAVAIR, and the coordination of

AIR-01. Project Manager's have charge of the overall management, direction, control and integration of project efforts.

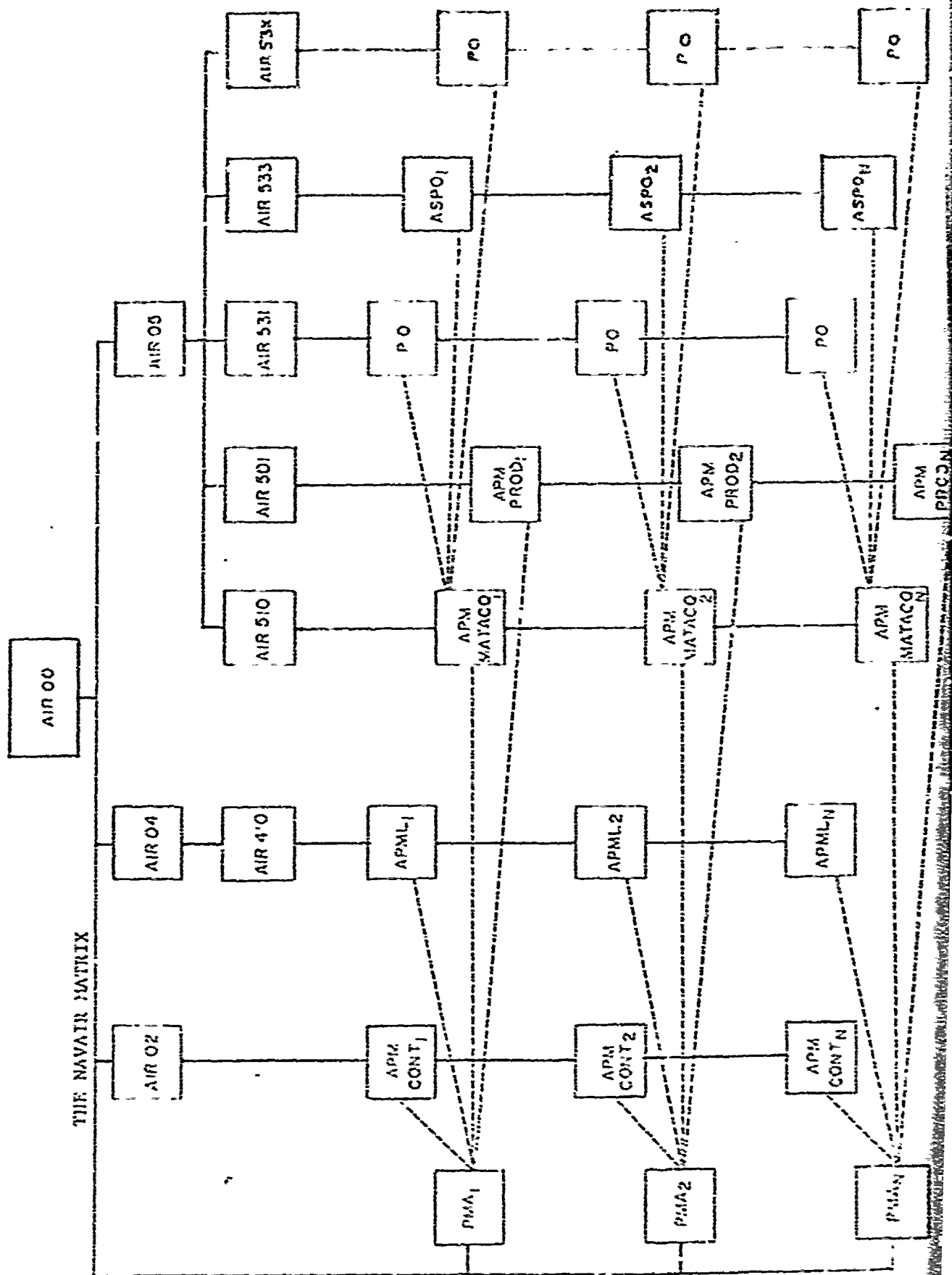
As implemented in NAVAIR, project management is superimposed upon the functional organization in a horizontal manner. To examine this more closely, let's ignore the Project Manager for a moment. (Refer to figure II-2). The resulting (vertical) organization then contains all the elements necessary to do NAVAIR's work. AIR-02 contracts, AIR-05 develops, AIR-04 supports, etc.

However, someone needs to be appointed to coordinate all the functions and tie the efforts of those groups together for any one given aircraft or program. That someone needs to be able to deal with the outside world, with authority concerning a particular system, and be able to reach across the vertical organization with access to personnel in those groups who have the technical expertise. That someone is the Project Manager.

Now as one adds several more Project Managers, each for a different weapon system; each with access to different people in the vertical organization, a matrix evolves, as appears in figure II-2.

Specifically, the PM's responsibilities and functions include the following:

COMMUNICATION: The PM serves as command spokesman and primary point of contact with higher authority to obtain requirements and policy guidance, and to report problems, project progress, etc.



SUPERVISION AND LEADERSHIP: This is over his project team in all applicable aspects of the program through all phases from conceptual through post-deployment.

MANAGEMENT AND CONTROL: The PM has control and decision authority of all resources made available and the application of these resources. Inherent is the responsibility for formulating budgets, plans and financial programming decisions, as well as the allocation of funds.

He also approves the scope, scheduling and costs proposed by the NAVAIR functional organizations for accomplishing the project effort, and performs continuous evaluations of progress against plans, costs against available funds, and capability against design objectives.

CONTRACTS: The PM monitors contract negotiations, including pre-contract conferences, source selection, type of contract, and method of procurement action. He furnishes information and requirements to the contracting personnel as necessary in order to achieve a good contract.

After a contract is let, the PM must ensure that the contract administration responsibilities are assigned appropriately to functional groups for contract line items.

II.3.1 The Aircraft Project Coordinator (APC)

It will be pointed out here that in some cases where an aircraft's production has been in existence for a considerable number of years, there is normally no longer a need for a normally staffed PMA office. Instead of disestablishing the office and transferring all necessary functions to field activities, the staff is reduced to a few key individuals and re-designated as an Aircraft Project Coordinator (APC). Production aircraft under his cogniscance are usually destined for Foreign Military Sales, or for use in the Training Commands.

II.4 The Class-Desk Officer

The Class-Desk is also known as the Assistant Project Manager for Material Acquisition. He is on the Project Managers team as the primary AIR-05 representative and is therefore considered to be the coordinator of all of AIR-05 groups actions in connection with the project. As indicated in figure II-2, the proper interfacing point of contact in the AIR-04 and AIR-05 organizations are the Assistant Project Manager, Logistics, and the Class-Desk, respectively. Again, one sees a vertical-horizontal relationship.

From the PM to the Class-Desk (C-D) is a vertical step. (See figure II-2). The C-D then projects horizontally to the functional divisions who support him in AIR-05. This places the C-D in a position of being responsible to AIR-05, through AIR-510, for all of his work performed in response to the demands of the PM.

The C-D must be responsive to the Project Manager to insure bringing the technical work in on time, on cost, and on performance. However, the manner in which he does so is in the province of the functional organization, ie., the engineering disciplines, the technical techniques, the data acquisition and analysis. The technical management methods are AIR-05's responsibility to the Commander.

The Class-Desk works for AIR-510 and, through him, for AIR-05. (AIR-05 signs his Fitness Report.) However, the C-D is doing his work in support of the Project Manager. For emphasis, the Class-Desk is AIR-05's man on the street as far as the project goes. Subject to any constraints placed upon him by AIR-510 or AIR-05, he is the ultimate technical authority for the airplane.

Details on how to do the job will be presented later. This portion is limited to what it is he does.

TECHNICAL AUTHORITY: The C-D must know his program thoroughly.

He needs to be totally conversant with the details of the program plan so that he can plan ahead for actions for which he is responsible. The principle source of these actions is the Project Master Plan (PMP) and the Post Production Support Plan. His main job is to insure that things are happening and action is taking place in accordance with the plan.

In total, he must thoroughly know the airplane. It is valuable if he has had operational flight experience in the model or in a similar one; for

the more familiar he is with it, the less trouble he will have in understanding the problems which come up in the job.

CORRESPONDENCE: The Class-Desk is dependent on correspondence, ie., letters, messages, memoranda, project directives, air tasks, work units, reports, etc., both incoming and outgoing. He reviews incoming correspondence in order to determine if it is for action or for information.

Once a correct action has been determined, his job then is to ensure the required response is initiated by the person responsible. Depending on the situation, that person will be someone he has tasked to reply, or himself. When the outgoing response is prepared, the C-D sees that correct procedures are followed and the correspondence is ready for delivery with a final signature. It should be noted that not all outgoing correspondence is generated as a reply to incoming correspondence, however, the same rules apply.

THE MODIFICATION PROGRAM: The modification program consists of the process of updating, improving, or fixing problems in the airplane. It basically involves planned and unplanned modifications.

The planned mods consists of OSIP's (Operational, Safety, Improvement Program) which involves annual requests of improvements the Class-Desk would like

to make, along with the justification for them. The requests are normally analyzed by the CPNAV sponsors, and a resulting program is then planned. Following approval, as is similarly done for unplanned mods, a request for an Engineering Change Proposal (ECP) is issued. The Class-Desk then has the responsibility for reviewing and processing the ECP through the Command.

Unplanned modifications consist mainly of problem fixes. The procedure for handling these is much the same.

PREPARATION OF THE TECHNICAL POSITION: Occasions arise which require information to be passed representing a technical position which AIR-05 or the command may desire to take. The Class-Desk is the one whose technical judgement is desired and who most likely is requested to prepare the information. This usually takes form as Point Papers, correspondence or audio-visual presentations.

MANAGE DIRECTED FUNDING: Funds are allocated to the Class-Desk by the Project Manager for certain work to be done. He then dispenses the money and work assignments to fulfill the requirements for which the money was given. He keeps account of the dispensing, the amounts on hand, the work to be done, and the progress being made on the work assigned.

ASSIGNMENT OF WORK: Besides the assignment of tasks to the

various in-house elements by the routing of correspondence to them, it is the Class-Desk's job to assign work to field activities, and to initiate the necessary documents to obtain contractor assistance.

This assignment to field activities is done by issuance of AIRTASKS, and Work Units, along with the funds transfer documentation. The mechanism for obtaining contractor work is through the Procurement Request and the contracting process.

REVIEW OF REPORTS: A major result of engineering work assignments to the field or to contractors is a series of reports. Even if the work contracted for is hardware, the work is substantiated by reporting. Thus the prime method of monitoring both program and technical progress is the reviewing of these reports. This, and personal liaison through visits ordinarily accomplish the monitoring purposes. Report reviewing and taking action on recommendations are essential elements of the Class-Desk's job.

MONITORING FLEET EXPERIENCE: The Class-Desk must be aware of what is happening in the fleet with aircraft and related systems. He should review incoming message traffic and correspondence, deployment reports, and other available material in order to determine how the systems are performing, if they meet the operational requirements satisfactorily,

how reliable they are, and the kinds of problems arising.

Special concern must be given to Safety UR's (Unsatisfactory Reports) which are transmitted by message and require immediate attention. Prompt coordination and cooperation with the AIR-04 counterpart can prevent a minor problem from becoming a major one.

II.5 The Functional Divisions in AIR-05

These are the centers of expertise in the various product oriented engineering shops, whose areas of purview include performing various AIR-05 tasks. These are the people to whom the Class-Desk sends the problems for solutions and preparation of positions or review of reports and incident action.

Some of the centers are considered staff divisions, while the rest are operating divisions. Generally speaking, those with numbers less than 530 are the staff divisions, while the 530 series are the operating divisions.

This section describes the functions and areas of responsibility of these centers.

II.5.1 Plans and Resources Division (AIR-500)

This recently formed division has as its primary function the Principal Support Office (PSC) for field activities. Although its responsibilities have not been clearly defined as of this date, it does also assume a few

of the functions previously performed by the recently dis-established Acquisition Control and Resources Division (AIR-501).

Among some of these are the management of resource allocations for Material Acquisition, long-range planning for allocations for the out-years, budgeting and accounting for AIR-05's O&MN and RDT&E portion of the Budget, and budgeting for GFE. In essence, AIR-500 has responsibility for AIR-05's allocated funds.

II.5.2 Systems Analysis Division (AIR-503)

Principally a staff division, AIR-503 performs, or leads, the studies mentioned previously. They conduct system analysis on advanced systems and/or improvements to existing systems for cost-effectiveness, mission-threat balance, etc. They also provide assistance on mathematical and analytical techniques, if needed, with in-house access to a general purpose computer.

II.5.3 Evaluation Division (AIR-506)

AIR-506 is responsible for and conducts the overall evaluation of design proposals for all aircraft, missile and target systems. They also administer the weight and balance control program for aircraft. They can provide extremely competent design advice and consultation services when required.

II.5.4 Aircraft and Weapon System Division (AIR-510)

This is the Class-Desk's home. His functions, described previously, are those the division performs for all

aircraft and air-launched guided missiles. The director acts as an assistant executive director to AIR-05 over all matters pertaining to systems, and derives from that position the coordinative authority over the functional divisions.

II.5.5 Engineering Division (AIR-520)

AIR-520 is responsible for broad engineering policy and engineering management procedures. They are the lead people in the so-called "-ilities"...ie., reliability, maintainability, survivability, etc. They also oversee the NATOPS, standardization and data requirements programs, and do the work concerning model designations and popular names.

Their Materials and Processes Branch are the experts in metallurgy and finishes, and are the ones to see in cases such as environmental corrosion and stress corrosion. One must always bear in mind that although this division is "-ility" oriented, the Class-Desk and not they, is line-responsible for the achievement of the system performance in those areas.

II.5.6 Airframe Division (AIR-530)

AIR-530 has responsibility for air vehicle airframes and integral mechanical systems necessary to flight. One extremely important function of AIR-530 is the administering and controlling of flight restrictions and flight clearances, including stores carriage and release. Although these are signed out by AIR-510, these restrictions and clearances are generated in AIR-530, to insure compatibility of various weapons loads with the airframe and adequate

flying qualities with the stores attached. They are responsible for maintaining the flight restrictions section of the aircraft flight manual in a current status. The other functions are implicit in the names of the branches of interest to the Class-Desk.

AIR-5301 is the Aerodynamics and Hydrodynamics Branch, responsible for aerodynamics, stability and control, flying qualities and flight performance. These engineers maintain considerable data on each airplane for reference and analysis of problem areas as they arise.

AIR-5302 is the Structures Branch, having the responsibility for structural strength, rigidity, vibration characteristics, flutter, fatigue life, flight and landing loads, etc. When (or if) cracks start appearing in an aircraft, these are the first people to see. As an inherent part of their job, they analyze loads data (obtained from counting accelerometers and from fatigue life tests) and determine the service life limits for an airplane. They can advise the Class-Desk when an aircraft is reaching its expected service life limit.

The Mechanical Equipment Branch, AIR-5303, is responsible for mechanical, hydraulic, pneumatic, and electro-mechanical systems, or appurtenances to an airplane, such as landing gear, control actuators, hydraulic lines, pumps, etc. In addition, their area includes environmental (heat and air-conditioning) systems and fluid transfer systems, fueling and refueling systems, drop tanks, canopies, access

seats, and so forth.

II.5.7 Crew Systems Division (AIR-531)

This division is concerned with the man-machine interface, and covers a broad range of topics, from helmets to boots, including the establishment of bio-engineering and anthropometric requirements, physiological tolerances, and environmental criteria for crews.

The AIR-5312 Branch is of particular interest because of the integration of the ejection seats into aircraft. This branch is also concerned with parachutes and ballistic deployment and spreading of the parachutes.

The AIR-5313 Branch is concerned with crew station design and human factors engineering, which addresses such things as instruments, switch and control location, display adequacy and methods, and the like.

II.5.8 Armament Division (AIR-532)

This division is totally responsible for all non-guided air-launched weapons such as rockets, bombs and flares; for airborne guns and ammunition; for the launching and suspension equipment for airborne weapons; for cartridges and cartridge-actuated devices for all applications; for practice and training weapons; for guided missile fuzes and warheads; and for armament monitor and control equipment (excluding fire control equipment).

II.5.9 Avionics Division (AIR-533)

AIR-533 has total material acquisition responsibility for avionics and electrical power distribution for aircraft,

missiles, and space avionics. The all inclusive term covers communications, IFF, tactical data processing, computers and software, displays, fire-control, weapon guidance and control, and flight control.

Besides operating its functional branches, AIR-533 provides ASPO's (Avionics System Project Officers) who, to Avionics, are much the same as the AIR-510 types for the overall airplane, as single points of contact and responsibility for the avionics suite of specific aircraft.

II.5.10 Ground Support Equipment Division (AIR-534)

AIR-534 has the broad responsibility with respect to GSE from the simplest special hand-tool through the highly sophisticated automatic avionics test equipment. They provide not only general test equipment and "yellow gear", but also Peculiar GSE (PGSE) developed and produced for a specific system.

II.5.11 Propulsion Division (AIR-536)

This division has the responsibility for aircraft engines, propellers, accessories, and electric power generating systems (as opposed to AIR-533's power distribution systems). Those items include, besides the engine itself: fuel controls, IR suppression equipment, bleed controls, fuel and ignition systems, oil systems, anti-icing equipment for engines, and so forth.

There are two branches of interest to the Class-Desk. The first is the Large Turbine Engine Branch, AIR-5361, which has cognizance over the bare engine. The other is the

Installation and Systems Branch, AIR-5363, which deals with installed engine performance. This responsibility extends to bleed air drain, inlet efficiency, accessory and fuel control performance.

II.5.12 Ship Installations Division (AIR-537)

AIR-537 is responsible for ship-aircraft interfaces and interface equipment. This includes cognizance over catapults, arresting gear, visual landing aids, aircraft maintenance spaces, etc., as well as aircraft equipment involved in the interface, such as arresting hooks, catapult hooks, etc. Certification of ships and ship equipment, both aviation carriers and non-aviation ships, is within the purview of AIR-537.

II.5.13 Support Services

In the conduct of the day-to-day business, there are important support services available implicit in the Class-Desk's sphere of work. These are:

Systems Criteria Branch (AIR-5106): This branch provides considerable assistance in the coordination of specification preparation for all of the AIR-510 Class-Desk officers. They maintain the baseline configuration specs for each aircraft, as well as the general specifications for aircraft weapon system development. This branch also represents the division on the Data Requirements Review Board.

Plans & Resources Management Branch (AIR-510R): This is the financial management branch of AIR-510, and accounts for all funds directed or otherwise allocated to

AIR-510 and the Class-Desk. They assist in the preparation of Work Requests, AIRTASKS, Work Units, and maintain an accounting of the Class-Desk's funds. Since so much hinges on funding, it would be wise for the Class-Desk to establish and maintain a good rapport with this group.

II.6 Functional Organizational Interfaces

A relationship, similar to the matrix relationship discussed earlier, exists between the Class-Desk and his principal contacts in the functional divisions in AIR-05. For example, the ASPO in Avionics is responsible to his Division Director for equipment being built in accordance with current techniques and policy, but is responsive to the Class-Desk insofar as he does that for the Class-Desk's airplane.

One benefit this type of organizational arrangement affords, besides economy of personnel, is cross-fertilization of ideas within technical disciplines. It also leads to standardization, and provides for corporate memory retention.

Chapter III

NCN-HEADQUARTERS SUPPORT

III.1 General

We have now seen what NAVAIR does, who the players are, and how they work together. As mentioned earlier, in addition to these headquarters types, there are field activities and contractors involved in the development, production, support, and repair of aircraft and related systems. This chapter will briefly cover the array of support available to the Class-Desk.

III.2 Contractors

Industry is the eventual developer and producer of aircraft and related systems. The prime contractor has the overall responsibility for the airplane. Engines are normally purchased separately from a different contractor and provided as GFE for integration into the airplane. In addition, there may be numerous sub-contractors and/or vendors who provide sub-systems, components, and the like.

Good communication and a continuing effective dialogue with the major producers are essential to promote a clear understanding of the program and the rationale for changes.

In some programs, the contractors are charged with the depot-level repair of aircraft and systems. In these cases, a close tracking program on progress and the relaying

of technical and program information between the contractor and NAVAIR is necessary.

III.3 Field Activities

These are separate commands, centers of expertise subordinate to the Commander, NAVAIR or, in some cases, directly to the Chief of Naval Material. They fall, generally, into two categories: industrial organizations and the RDT&E commands.

III.3.1 Industrial Organizations

These consist of the Naval Air Rework Facilities, who repair, overhaul, and otherwise support aircraft and related systems. They are located at various Naval or Marine Corps Stations around the country. They are under the management cognizance of the AIR-04 group in NAVAIR, who operates through the NAVAIR Systems Command Representatives, Atlantic and Pacific, located at Norfolk and San Diego, respectively.

III.3.2 RDT&E Organizations

Within the Material Command, there are a number of such field activities. Each of these facilities have the capacity to perform certain technical functions; each is a leading specialist within its own area of research. In many instances, the Class-Desk will work directly with personnel at one of the sites, while other times his involvement with them will be through the cognizant functional division.

In either case, this involvement includes work

that is being done in conjunction with the Class-Desk's tasks concerning his program, ie., prototype design testing and evaluation, system performance testing, maintainability and reliability testing, to name a few. Only those involved with aviation matters directly will be mentioned here.

NAVAL WEAPONS CENTER, China Lake, California: A "laboratory"

under CHNAVMAT, the NWC is deeply involved in weapon systems for strike aircraft. They have a rich background in missiles and other weapons, and a large group of extremely competent personnel. Primarily an R&D command, they conduct considerable in-house design of prototype systems, including the fabrication of systems capable of being flown. They have a complement of aircraft upon which to conduct engineering tests of the systems they develop.

NAVAL AIR DEVELOPMENT CENTER, Warminster, Pennsylvania:

Another "laboratory" under CHNAVMAT, NADC has long been involved in the development of airborne systems. In addition to this system development, they have maintained a structures lab, expert in such things as fatigue test, structural modification design, racks, and other devices. Known perhaps more for their work in electronic systems, they nevertheless have retained a broad base of expertise.

NAVAL AIR ENGINEERING CENTER, Lakehurst, New Jersey: A

development activity under NAVAIR, NAEC is essentially a field activity responding to the Ship Installation

Division in headquarters. They develop catapults and arresting gear, but also retain a capable industrial division with production capability of industrial devices. The Class-Desk has little to do with NAEC directly.

NAVAL AIR TEST FACILITY, Lakehurst, New Jersey: Under NAVAIR, NATF is primarily a test and evaluation command for the kinds of equipment NAEC develops. Contact with them is minimal.

NATIONAL PARACHUTE TEST RANGE AND NAVAL AEROSPACE RECOVERY FACILITY, El Centro, California: Under NAVAIR, the NARF provides for the testing of parachutes, ejection seats, and related equipment. Should system deficiencies arise, however, the Class-Desk would be dealing with them, in conjunction with AIR-531 types.

NAVAL WEAPONS EVALUATION FACILITY, Albuquerque, New Mexico: NWF conducts the nuclear safety inspections of all aircraft. They certify the compatibility of such weapons with the specific aircraft, and prepare and maintain current the nuclear weapon loading check lists.

NAVAL AVIONICS FACILITY, Indianapolis, Indiana: NAFI is under NAVAIR, and is a combination developing and prototyping activity having an industrial capability for producing pre-production models of avionics systems. They are an extremely capable activity in diverse areas of the avionics field.

NAVAL AIR PROPULSION TEST CENTER, Trenton, New Jersey: An

extremely well-equipped test facility under NAVAIR's command, NAPTF is the activity to whom AIR-536 looks for rigid test on engines. In addition to their test efforts, they are extremely capable and responsive in delving into the problems occurring with aircraft engines and accessories. Normally, contact with NAPTF will be through AIR-536.

NAVAL MISSILE CENTER, Point Mugu, California: One of the two primary test and evaluation activities under NAVAIR's command, NMC is broadly engaged in the test and evaluation of air-launched guided missiles and the associated weapon control systems. In addition, they perform the same functions on other air-launched weapons and aircraft guns. They are also a primary development activity for Electronic Warfare equipment and techniques.

Besides aircraft systems, NMC has responsibility in range instrumentation equipment, counter-counter-measure equipment, and airborne targets. They are co-located with the Pacific Missile Range, and thus have access to some of the most sophisticated range data acquisition equipment in existence.

Some tasks the Class-Desk will send directly to the NMC, with support from the functional divisions in headquarters, while others, notable in missiles and weapons, will work through the appropriate offices.

NAVAL AIR TEST CENTER, Patuxent River, Maryland: Considered

by many to be NAVAIR's principal test and evaluation activity, NATC provides the Navy and Marine Corps test pilots who invariably are the first service pilots to fly a new airplane. Involved in tests both at PAX and at contractors' plants, NATC evaluates a broad spectrum of aircraft characteristics, including flying qualities, control performance, installed engines, weapon systems, electrical power equipment and many others. They also evaluate aviator personal equipment, human factors aspects of airplanes, and perform the stores release tests necessary to certify weapon loads or to define restrictions on the aircraft. They perform the tests prescribed by the Board of Inspection and Survey on new or significantly modified aircraft. NATC also investigates airplane problems involving flying qualities and performance, spins, and many other factors. At NATC, properly, is located the Navy Test Pilot School as well.

NAVAL WEAPONS ENGINEERING SUPPORT ACTIVITY, Washington, D.C.:

NWESA is a NAVAIR conglomerate field activity providing a variety of support elements to the headquarters. Principally, they provide assistance in the quality assurance area, but possess a diverse talent on tap. In addition, NWESA maintains the East Coast Calibration Lab for calibrating test equipment and tools against primary standards.

SECTION II

ADMINISTRATION

Chapter IV

ADMINISTRATIVE DETAILS

IV.1 General

This next section covers the Administrative details of the Class-Desk's job and how he performs his tasks. It touches on those functions that occupy most of his working day, ie., meetings, reports, duties, briefings, etc. It covers the support services available and how to get them; what funding is available, and how and who manages it; how to assign work to contractors and field activities; the procedures for developing a new aircraft; how to handle modifications and design changes; and a few other topics for which guidance will be useful.

It is emphasized that there are people around to help when this guidance is insufficient, or a unique subject is not covered. The essence of the organization in NAVAIR is the mixture of civilian and military personnel that brings in operational experience to lend content to that which NAVAIR does, while at the same time providing corporate memory and continuity with the dedicated civilians.

IV.2 Correspondence

As mentioned previously, the Class-Desk is dependent on correspondence. NAVAIRINST 5216.8 of 6 December 1973 promulgates the formal procedures for handling correspondence

in the command. However, one can be interested in looking at the practical side of this topic. How is it handled? What does one do when he gets it? This chapter specifically addresses these questions.

The material the Class-Desk receives, or generates, runs the gamut of correspondence one has seen during his service career....directives, letters, memoranda, messages, telephone calls, reports and forms. These originate from a diverse field of sources.... the fleet, contractors, higher authority, Project Managers' office, functional divisions, etc. Generally speaking, this correspondence can be divided into two types: general and aircraft peculiar.

IV.2.1 Procedures for Correspondence

GENERAL CORRESPONDENCE: This material consists of general informational matter to all, covering a broad range of subjects of a general nature, but related to NAVAIR matters. The Class-Desk normally will not have any need to retain it, but if it is something he may want to refer to in the future, he can file a copy. His initial on the branch routing indicator is an indication that he was afforded the opportunity to see the material, but not necessarily that he has digested it thoroughly.

AIRCRAFT PECULIAR CORRESPONDENCE: This class of correspondence is that which the Class-Desk is primarily concerned. It consists of many forms, but it usually requires him to do something with it. From outside the command he will receive messages, letters, reports and speedletters, dealing

with a myriad of subjects, but all pertaining to his project and to his particular area of responsibility. They will include such things as reports of unsatisfactory performance of the airplane or systems, the need for engineering changes, requests for material, reports and data gained from test and evaluation, and plans for incorporating changes and modifications to the airplane or its systems. Accident reports, comments on safety, and requests for information concerning those subjects are also items of extreme importance.

Aircraft peculiar correspondence also originates from within the command. Besides letters and messages prepared as outgoing correspondence, there is a considerable amount generated for internal consumption. Included in the latter are memoranda from the Project Manager's office concerning both program and technical subjects; memoranda from AIR-04 divisions and from AIR-05 component divisions on technical subjects peculiar to the originating division; Project Directives, which transfer money from the PM office to the Class-Desk for work to be done by the field activities or the contractors; Change Request Forms; travel requests; and AIRTASKS/Work Units for assigning work to field activities, etc.

The Class-Desk is responsible for reviewing, screening, and routing the correspondence to the proper person for action or review (See figure IV-1). The first step is to scan through the correspondence to determine whether some action is required. If it is for personal

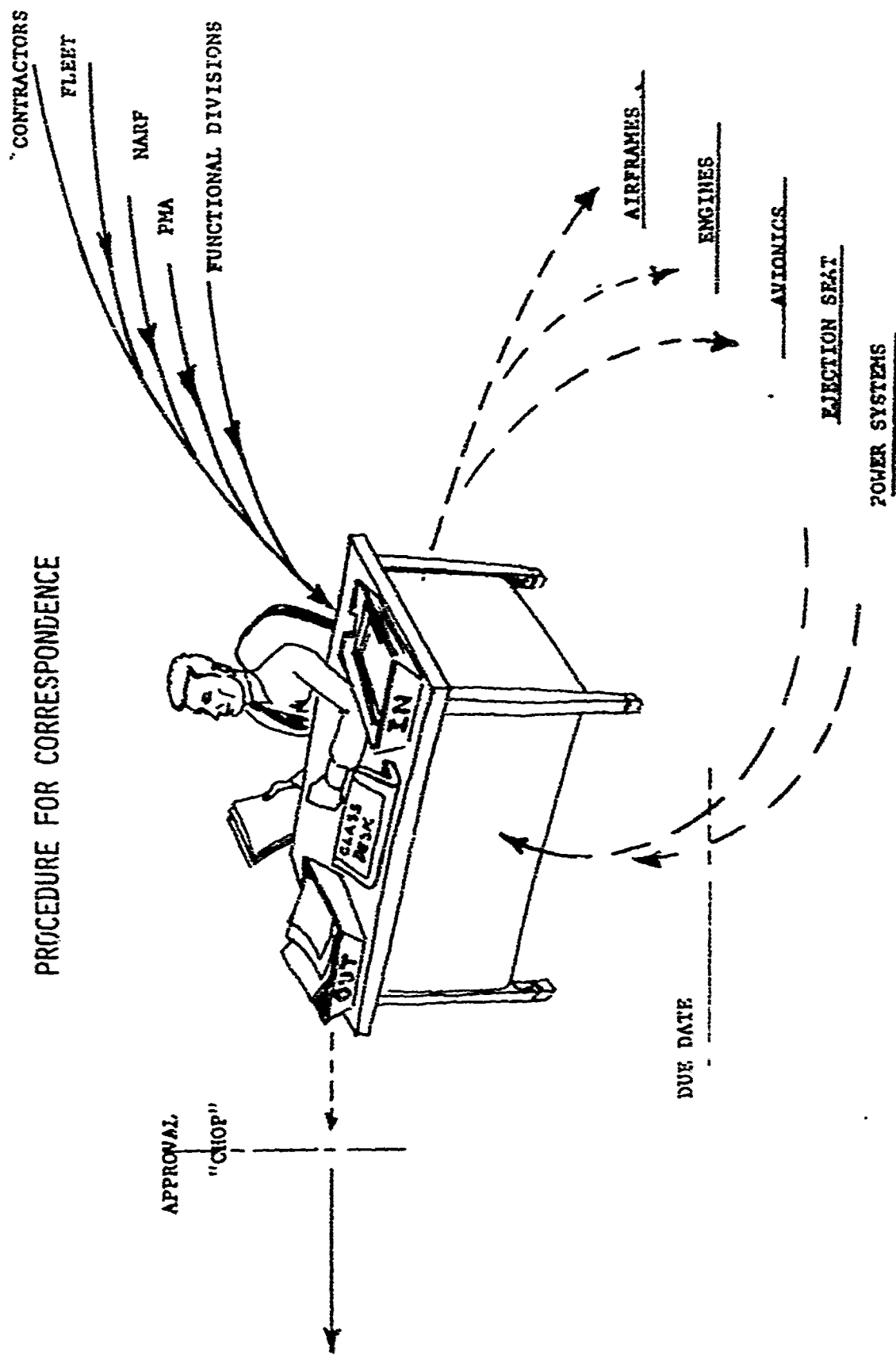


FIGURE IV-1

action, he needs to do the required research if necessary, and prepare a reply.

If he needs to route it on, the Class-Desk normally keeps a copy and a record of it so he can know when to expect a reply. If he is thoroughly familiar with the subject, he may want to indicate his opinion or position on the matter to the component position.

In cases of information only material, the Class-Desk needs to use his judgement if he should send it on to one of the component divisions for their information. In all cases, it is his judgement exercised on the handling of the incoming correspondence that determines the technical health of the project.

IV.2.2 Routing/Logging/Reminder System

Unfortunately, just routing material to a cognizant division is not assurance that appropriate action will be taken. In recognition of this problem, the functionaries have developed a routing/logging/reminder system in order to keep track of the correspondence. The paper part of the system consists of three types of pre-printed route sheets (Take for Action, Review and Comment, or for Information), a correspondence log book format, and two pre-printed reminder forms (First Reminder and Second Reminder).

Making the system work requires a brief notation on the correspondence as direction to the clerical assistants. When the Class-Desk has reviewed the correspondence and has determined what he wants done, he notes those instructions

at the top of the letter, or message. The notation consists of the code to which he wants it sent, the purpose for which it is sent (A for action, R/C for review and comment, I for info), the date routed, and the date by which he wants a reply back.

When the Class-Desk has received the reply, has reviewed it for concurrence, and is satisfied as to its adequacy, he checks it off in the log as being completed for action. In reviewing the correspondence for final "chop" before it goes forward for signature, the Class-Desk normally gives it a final inspection to determine that:

- (a) the position taken is a technically correct one,
- (b) it is in accordance with the program plan,
- (c) all the effects of the proposed action are understood and are acceptable, and
- (d) the staff work is indeed complete.

If a due date has arrived without return from the action addressee, a First Reminder is issued. If there still are no replies in a week, a Second Reminder is sent. If this latter action produces no results, it is time for a visit or a telephone call to "express interest in the matter." That usually suffices. If it should not, and the required action is important, the Class-Desk will need to go up the line to get assistance.

Messages are sent out, logged, and handled in much the same fashion as other correspondence, except that the

Branch Head usually wants to see all the message traffic coming into the branch.

CONGRESSIONAL CORRESPONDENCE/L. JIRIES: An exception to the above procedures is the handling of Congressional correspondence or telephone inquiries. Such matters are coordinated by the Legislative and Information Division, AIR-950, in order that responses to inquiries be properly cleared and that higher authorities be informed of such liaison when appropriate. If the Class-Desk should receive such correspondence, or a telephone inquiry, he should inform AIR-950 immediately.

IV.3 Meetings

While much of the Class-Desk's work is accomplished through correspondence, the other forum for work is the meeting. These run the gamut from one-on-one discussions, to large scale meetings with formal presentations. Some of the more prominent are discussed in this section. Prior to noting them, however, it should be indicated that there are several conference rooms interspersed throughout the command for use on a first-come, first-served basis. A list of those rooms under the cognizance of AIR-05 is available, along with Visual Aid equipment.

IV.3.1 Branch Meeting

Held weekly, this meeting is held for the purpose of updating the Branch Head on the Class-Desk's project and on

any problems he is encountering in the conduct of his work. It provides the Branch Head with appropriate information for passing on to the Division Director at their next scheduled meeting. The Class-Desk should be prepared to be brief and concise, but still get his problems aired.

IV.3.2 ACCB Meeting

Held every Thursday at 1230, usually in Room 1206, JP-1, the Aircraft Change Control Board meeting addresses those changes which have been scheduled for that day. If none of the Class-Desk's changes are scheduled, there is no need for him to attend. Otherwise, he, and the cognizant AIR-05 component engineer, should be there.

IV.3.3 Division Directors Meeting

Held every Wednesday, these are for the purpose of dialogue between AIR-05 and his Division Directors. The Class-Desk does not attend these unless an occasion arises, in which case he will be notified. When he does attend, he usually is asked to brief topics on the readiness, improvement, status evaluation (RISE).

IV.3.4 Project Management Team Meeting

These meetings between the Project Manager and the team members are held on an ad hoc basis. If one is planned, the PMA normally sends a memo asking for agenda items, or, perhaps, indicating the subjects he desires to discuss. More than likely, however, the agenda will develop as the meeting progresses.

IV.3.5 Program Reviews

These meetings are rather large, with attendance by personnel from all commands/activities/contractors engaged in the program's work. They are held about twice a year in Washington. The agenda is established by the PMA, and will normally include one or more presentations from the Class-Desk. Inasmuch as the number of attendees exceeds the capacity of any of NAVAIR's conference rooms, other arrangements must usually be made.

IV.4 Reports/Passing Information

Basically, little is required of the Class-Desk Officer in the way of reports concerning progress of the project. However, for the purpose of passing on information, there are two primary methods.... Branch Notes and Point Papers.

IV.4.1 Branch Notes

Branch Notes consist of a compendium of notes concerning each project in a Branch, collected semi-monthly by the Branch Head for forwarding to the Division Director. They are intended to apprise the Division Director of significant happenings in the project, including major problems being encountered; therefore, subject matter should be limited to that type of material. Although the notes are basically informal, they subsequently can be forwarded to AIR-05. Thus they should be concise and to the point.

IV.4.2 Point Papers

For items of special significance warranting more

attention than periodic Branch Notes might gain, or for items of information whose timeliness is such as to require forwarding aside from the Branch Notes, the Point Paper is the desired format. It is a simple form, consisting of the originator's code information, the Subject, a Discussion section, and a Recommendation section.

AIR-05 desires that Point Papers submitted to him whether for his information or for passing up the line, be limited to one page or less. The Class-Desk should use judgement concerning this requirement. He must be as concise as possible, but if the matter requires additional pages, then he should use them.

IV.5 Travel

Because of the nature of his job, the Class-Desk needs to do a considerable amount of travel, ie., to visit contractors, field activities, etc., for meetings, program reviews, and so forth. This section covers some additional important items of information concerning travel and the rules which govern it under NAVAIRINST 4650.1B, and the procedures for arranging travel.

IV.5.1 Pertinent Information

The Class-Desk should select travel to afford a minimum of time lost in transportation delays. Government air must be used when it is available and practical; commercial air when significant saving in time will be more economical or otherwise more advantageous. Contractor-

provided transportation and/or accommodations may be used, but must be approved, prior to the travel, by AIR-05. If the Class-Desk plans to use such contractor transportation, his request must state a clear benefit. In general, however, the command policy is to avoid the use of contractor-provided transportation.

IV.5.2 Procedures

Inasmuch as the Project Office normally provides the funds for travel, the manner of funding may differ from program to program. The travel forms are usually prepared by the Class-Desk. The travel orders are then usually prepared by his clerical assistants, along with any security clearances and reservations required. These forms are approved by the Branch Head and Division Director, or the FIA, depending on whomever is funding the trip. AIR-510B approves the transfer of funds in the case when the Division Director (AIR-510) funds travel. If foreign travel is involved, AIR-05 signs in lieu of the Division Director.

The orders themselves are then processed by the Travel Services Office (AIR-9703), who normally require three days notice for commercial air reservations. They furnish the necessary tickets.

Travel claims should be submitted as soon as possible and, in the case where an advance was made, not later than 15 days after completion of the trip. When a claim is submitted, a copy should also be provided to the office supplying the funds for the travel.

NOTE: Be especially careful to note meals provided by a contractor, or the cost of meals procured at a contractor's facility. Omission of that information constitutes a falsification of claim, and in some cases has led to disciplinary action.

Chapter V

FINANCIAL MANAGEMENT

V.1 General

In an earlier section, it was established that the Class-Desk is responsible for managing directed funding--to receive, dispense, and keep an accounting of those funds allocated for work controlled by AIR-05 organizations. This section takes a closer look at this area, to describe how the Class-Desk gets money assigned, how he dispenses it, who keeps account of it, and where to look for funds if the FMA funds are inadequate.

V.2 Appropriations

The appropriations most applicable to NAVAIR are: Aircraft Procurement; Weapons Procurement; Research, Development, Test and Evaluation; Operations and Maintenance; and Other Procurement. These are described in other publications available to the Class-Desk. Of the above appropriations, only APN and RDT&E are of primary significance in the Class-Desk's daily work, since those are the only funds made available directly to him. On occasion, however, small amounts of other funds may be made available for specific purposes.

V.3 Budgeting

In order for the project to be cited in one of the above

appropriations, the Navy, through the DCD, submits an annual request for funds. The mechanism for these requests is of no particular consequence to the Class-Desk, in that the PMA is responsible for submissions concerning the program. However, in order for him to assess his needs, he will normally ask the Class-Desk for a projection of his requirements. In turn, the Class-Desk queries the component divisions for a projection of the projects needed to be performed, and an estimate of the cost involved. Unless the project is well-known to both the Class-Desk and the PMA, a justification should be provided. When responses to those queries have been received, the Class-Desk reviews them for validity and submits them as a package to the PMA for inclusion in his budget request.

V.4 Allocation of Funds to the Class-Desk

The vehicle for allocating funds to the Class-Desk for approved projects is the Project Directive. The PD consists of two parts. The first part contains information concerning the work for which the funds are being provided. It cites pertinent references, along with general information about the project. An Action paragraph specifically states what the money is intended for, and directs specific codes to take the necessary action. A third paragraph, if appropriate, is used for establishing any limitation on the use of funding, and an additional paragraph may be used to indicate that the PMA must approve all funding documents or procurement

documents prior to issuance.

The second part of the Project Directive is the funding direction. It cites the appropriation numbers and accounting data, the description (by title) of work to be done, the codes to which the money is directed, and the amounts of money involved. There are two columns indicating funding. The first indicates the current direction. If this is an initial PD, then the first column and the second, which indicates a cumulative action, will be identical. PD's which follow an original one, however, will indicate different totals in the two columns. The first is the current transfer of funds, while the second relates the balance of all funds transferred.

Note that the PD is the mechanism by which total funds are transferred in both directions; i.e., the FMA may be taking money away from the previous amounts authorized for the CD's use. On the PD's, the direction of flow of funds is indicated by a + or a -, for sending or removing respectively. The PD, then, is the document by which the FMA authorizes the AIR-05 organization to proceed with work. When the Class-Desk receives it, he should insure that AIR-510R has received a copy and has entered it on the balance books they keep. Even though most FMA's (or APC's) record and keep track of funds that have been allocated, some Class-Desks may monitor their own funding when a PD is issued to them.

7.5.1 Funds to contractors under contract

The major contract the Class-Desk has with a contractor has line items in the contract, some of which are established for "funding purposes only". This line item becomes, then, a "call" contract, meaning that no work is performed until a call is placed against the contract. When such a call is made, it must be accompanied with funds. The mechanism for providing the funding is the Requisition for Material or Services, NAVAIR For 4235/2. The Requisition is addressed to the NAVFRC, and describes the material or work desired and the amount of money authorized. A cumulative total is also carried forward on the requisition. The requisition is accompanied with a Procurement Financial Data Appropriation Accounts Sheet, NAVAIR Form 7000/30, which cites the appropriate accounting information and the amount of money authorized. The Class-Desk makes up the two forms, and these two documents are accompanied by a letter to the NAVFRC describing the work required and requesting that the contractor be tasked to perform it. The NAVFRC, in turn, authorizes the contractor to proceed with the work. Such requisitions are signed for the command by an individual in the AIR-03 organization.

V.5.2 Funds to Field Activities

Work is assigned to field activities by AIRTASKS and Work Units. However, in order for the field activity to begin work assigned, it is necessary that funds be in hand to cover the cost of the work. The mechanism, or vehicle, for passing the funds to the field activity is the Work

Request, NAVCCMPT Form 140. The Class-Desk makes up the form in accordance with the Project Directive and starts the chain of approvals. The Work Request is addressed to the field activity where the work is intended, and contains appropriation data, the amount of the funding authorized, the Program Element/Project Number, and the title of the authorized work as shown in the Project Directive. A description of the work to be done is included, along with reference to the AIRTASK/Work Unit. As with requisitions to the contractor, Work Requests can be amended to add or take away funds, so a cumulative total (balance) is indicated on each Work Request or amendment issued to that activity. Also, as with other financial documents processed to addressees outside NAVAIR, AIR-510R checks to ensure all accounting data is complete, and then the Work Request is signed out in the AIR-00 organization.

7.6 Expiration of Funds

This subject is one which merits separate comment. Each appropriation has associated with it a period of time available for obligation of the funds, beyond which time, if the funds have not been obligated, they are returned to the General Fund and are no longer useful to the Class-Desk. The expiration periods are AFM - 30 months; JPM - 36 months; OAM, - 12 months; LPM - 30 months; and RDT&E - 12 months. All that is necessary to ensure retention of the funds is to obligate them by Work Request to the field activity,

have the field activity accept them officially, and have the field activity, in turn, obligate the funds by assigning them to an official job order. Expenditure of the funds then must be completed within the next two years to avoid losing them. There have been occasions on which funds have been sent to the field, without sufficient work assigned to use them up. It pays to keep abreast of the funding expiration situation, or at least to review it about three months prior to the beginning of each fiscal year. Under certain conditions the funds can be extended for short periods of time, but the process gets rather tenuous. If it should arise, the Class-Desk should seek the assistance of AIR-510R.

V.7 Additional Sources of Funding

Normally, the Project Manager controls all the funding required to conduct his project, and all the work necessary to prosecute the project is funded from these monies, except as described in this section.

V.7.1 Change Money

In the APN-1 funds, which are controlled by the PMA, there are a number of line items, including flyaway costs, and the costs for changes to the aircraft while in production. Such change costs include the non-recurring and the recurring costs. However, for out-of-production airplanes, no provision is made for the PMA's funding. Instead, APN-5 funds provide for the engineering and purchase of kits and the C&M funds provide for installation. The process of

obtaining those funds is to propose such changes through the CSIP (Operational, Safety, Improvement Program), which is described in detail in another section, or directly to AIR-1041 for Modification Funds in an emergency.

V.7.2 Flight Test, General

This project is administered by AIR-510, and is intended for otherwise unfunded projects of testing for expansion of envelope, marrying new weapon loads to existing airplanes, operation of the Test Pilot School, and performing such other tests as may arise during a budget year. Normally, AIR-510 reserves these funds for aircraft which are out of production and which do not have any identifiable bucket of funds; however, if the appropriate occasion and need arise, it is a source of which the Class-Desk should be aware. The funds are from the RDT&E appropriation.

V.7.3 Sustaining Engineering - Aircraft Fleet Support

This project is also administered by AIR-510, and is funded out of the C&EN appropriation for the purpose of investigating problems with aircraft occurring in fleet operations. Again, this project is generally reserved for out-of-production aircraft, but may be tapped at the proper moment.

V.8 Tracking of Funds Dispensed by the Class-Desk

Once the Class-Desk has sent funds to a field activity, and assigned work for which the funds are intended, the requirements of good management dictate that he review

progress of work and expenditure of those funds on a periodic basis, in order for him to detect incipient overruns in cost, or the availability of unused funds and make appropriate adjustments in his program. One can use the C/SCSC procedure if agreed to by both parties, or a similar work unit tracking system which involves the submission of information from the field activities on a periodic basis. Trouble areas are reported on a "management by exception" basis, although the information is available for perusal and review at any time.

Chapter VI

ASSIGNMENT OF WORK

VI.1 General

Chapter 5 discussed the sending of funds to field activities and to contractors to cover work desired. This chapter will cover the documentation for actually assigning the work. Work is assigned to field activities by AIRTASKs and Work Units; to contractors by a contract. In some cases, a contract will already be effected with the contractor, but NAVAIR needs to turn him on to do something under the contract--the vehicle is sometimes called a "call" against the contract. So the question for this chapter is "How?"

VI.2 AIRTASKs and Work Units (Refer to NAVAIRINST 3000.6)

The vehicle for assigning work to field activities is an AIRTASK. All the work at any individual field activity to be accomplished within a particular budget area is covered by a single AIRTASK. It will outline, in general terms, the technical area encompassed. Specific guidance for individual task assignments is then contained in Work Unit Assignments, which are technical descriptions of work to be accomplished within the scope of the basic AIRTASK. It should be noted that when only one task is desired, and can be well defined, with no anticipation of assigning more work to that field activity using the same funding pot, then the AIRTASK alone is required--it serves as a Work Unit also. In such a case,

the AIRTASK should be more explicit and detailed than in those cases where additional Work Units are anticipated. The form used for both AIRTASK and Work Unit Assignments is NAVAIR For 3930/1 (7-66). Detailed procedures for completing the form are contained in the cited instruction.

One of the management tools, for ready reference, is an AIRTASK/Work Unit Book. This book is maintained by the Class-Desk and contains a copy of every active AIRTASK and Work Unit for his program. It also contains a record of actions (telephone calls, requests for data, receipts of information) concerning each Work Unit. In addition, the Work Request (funding sheet) and the Work Unit Tracking Information described earlier are kept on this book, so as to provide a full picture of outstanding field activity work when needed. As Work Units are completed, they are removed from the book; new ones are added when they have been approved.

VI.3 Contracts

As indicated earlier, work can be accomplished against an existing contract, by issuing an assignment to the contractor, or negotiating a new contract.

VI.3.1 Existing Contracts

There are many kinds of contracts in existence. Generally speaking, to order new work, or change the nature of the contracted work, requires a Change Order, which is brought about through much the same process and is discussed in the next chapter. Sometimes, there will exist contracts

with provisions for certain types of support on a "call" basis. That is, no work is done and no charges are made to the government until an order is placed. This type of contract is extremely useful, for it saves many weeks of delay for negotiations in getting work assigned.

To assign work, the following steps are followed:

(1) After discussion with the contractor concerning the work desired, or concerning work he feels should be done, subject to the PM's approval, the contractor submits a letter of proposal covering the work and the proposed cost. If the work includes submission of data, he will attach a CDRL (Contract Data Requirement List) to the proposal letter. He submits this via the NAVPRO/CAO.

(2) The Class-Desk then addresses a letter request to the CAO describing the desired work (usually by reference to the contractor's proposal letter) to be done. Enclosed with the letter is a Requisition, NAVAIR Form 4235/2, described earlier in chapter 5, and its accompanying Procurement Financial Data sheet, Form 7000/30. Copies of all the requisitions made against the contract are kept in a special file for ready reference.

VI.3.2 New Contracts

When existing contract with the desired contractor does not cover the kind of work needed, or when a different contractor, not covered under contract, is needed, then it is necessary to effect a new contract. Note: Except under very special circumstances, it takes from four to six months

(sometimes more) to achieve a new contract, so considerable planning ahead is necessary if the PMA is going to go this route. (For procedures, refer to NAVAIR-INST 4200.13.)

The rules concerning contracts are so involved there is no point in putting them down here. If the Class-Desk gets involved in the need for achieving a new contract, he should consult with the AIR-02 people before starting. Essentially, his part in the process is the preparation of a Procurement Request, NAVAIR Form 4235/4 (8/69) in accordance with the detailed procedures described in the instruction, assuming he has the funds on hand and authorization in a Project Directive from the Project Manager, and then pushing the PR through the routing chain to the AIR-02 people responsible for the contract. If the contract is not to be advertised (generally, the ones he is interested in are not), then he will be required to assist in the preparation of Requests for Authority to Negotiate (RAN) and proposed Determination and Findings (D&F), or other similar documents which include information about the proposed work and the contractor to be solicited. Note: Time can be compressed in the process, by issuance of a letter contract (by AIR-02) or by inclusion of anticipatory work clauses in the eventual contract. These are unusual cases, however, and must be carefully structured to ensure fairness to both the contractor and the government. The Class-Desk should NCT deal directly with the proposed contractor to turn him on to do work. It is an easy way to get into trouble. He should let the experts do it, if it is necessary.

Chapter VII

CONFIGURATION CONTROL

VII.1 General

The previous section discussed how an aircraft design evolves. The Class-Desk Officer is a central figure during those stages, and performs a myriad of functions. One of those functions is the control of the configuration of the aircraft weapon system as it evolves. As the design becomes "mature", and the airplane is in service, his emphasis gradually shifts to where most of his effort is applied to configuration control. This section will discuss what configuration control is, and how he goes about performing this essential function.

VII.2 Policy

Policy with regard to configuration control is annunciated in NAVAIRINST 4130.1 and NAVAIRINST 4275.3. In general it adds up to: (1) Configuration Management and Configuration Control shall be vigorously applied to NAVAIR programs and projects; (2) The decision to implement changes shall be made upon consideration of total impact of the change; (3) Insofar as practicable, changes shall be installed in "blocks" of aircraft; and (4) Each proposed change shall be evaluated on the basis of the overall net benefit of the proposed change, including, as an alternative, not making the proposed change.

VII.3 Control and Discipline

COMNAVAIR exercises his responsibility for configuration management through a structured hierarchy which involves most of the operating groups. The principal organizations and/or tools employed in controlling the process of configuration control are as follows:

CONFIGURATION MANAGEMENT OFFICE (AIR-01A6): This office is the central authority within NAVAIR for configuration. It is responsible for developing policies, criteria and procedures for configuration management, and for conducting such programs as are necessary to insure proper implementation of those procedures and policies. In general, the Head of this office sits as chairman of the Configuration Control Boards.

CONFIGURATION CONTROL BOARD (CCB): This Board actually consists of several sub-boards, the one in which the Class-Desk is most involved with being the Aircraft CCB (ACCB). It consists of several voting members and non-voting members who attend meetings to insure their particular areas of responsibility are covered as far as changes are concerned. The full membership is described in the instructions. (See Figure VII-1 for essential membership.) The CCBs are established to exercise engineering change control over specified configuration items. They review, evaluate, and have the authority to approve or disapprove proposed Class I engineering changes to configuration items which are

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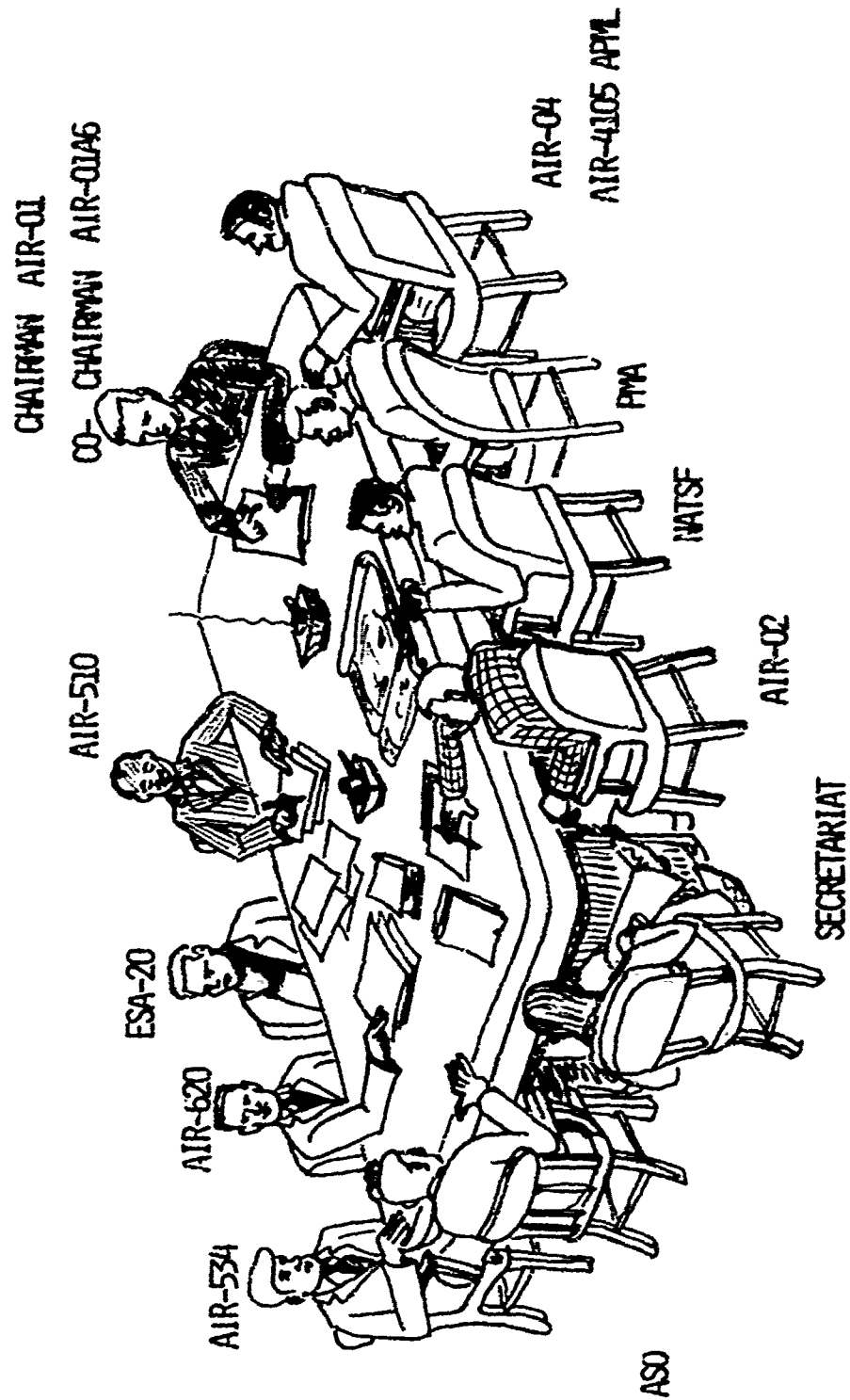


FIGURE VII-1

in development, production, or Fleet use.

CCB SECRETARIAT (AIR-01A64): This is a unit of the Configuration Management Office whose purpose is to maintain master records for all Class I engineering change proposals, including recording receipt, distribution and disposition of all Class I ECPs; reviewing all Change Requests to be submitted to the CCBs, such as scheduling of meetings, preparation of agenda, recording and issuing minutes of the meetings; coordinating and implementing actions approved by the CCBs, including preparation of contract Change Orders; and recording accomplishment of those actions assigned to implement Change Requests approved by the CCBs.

MODIFICATION STATUS REPORT: This is a device designed to assist the Class-Desk in keeping track of the progress of ECPs through the chain of events and procedures which must be followed.

VII.4 Generation of a Change

Changes to aircraft and systems generally result from some need evidenced from use of the system. One of the most prevalent causal factors in generating changes is failure of the system in the fleet. In the case of systems or components which affect safety of flight, one such failure is usually the subject of intensive investigation into the cause of the failure and the possible effects of additional failures if corrective action is not taken. In other cases, repetitive

failures of systems which result in poor availability will be sufficient stimulus to investigate and determine the work of a fix. Another prime reason to effect a change is the need for product improvement--to make the system better able to do its job, or to improve it to the point of being able to do additional functions. Recently, changes born of the need for better reliability or maintainability are given serious consideration.

By whatever stimulus, a change starts as an idea which is then given consideration from all aspects--engineering, cost, potential fleet incorporation and use, effects on the system or interfacing systems, and the time it takes to achieve the change. Once this consideration has been given, the first step in the process has been accomplished and the following procedures are initiated.

VII.4.1 Funding

Generally speaking, APN-1, which is administered by the Project Manager, funds changes to aircraft in production. Retrofit or out of production aircraft changes are funded under APN-5 or APN-6, administered by AIR-104. These funds derive from the CSIP program which will be described later in this section. Installation of changes is funded out of C&M. The prime reason for bringing up the subject of funding here is that it is the main stumbling block which the Class-Desk faces throughout the whole configuration control evolution. The principal reason for delay in bringing changes to the ACCB, and in incorporating them in the fleet,

is the lack of timely availability of appropriate funds. This subject, therefore, must be one of principal consideration in the early determination concerning whether or not to pursue a change to the aircraft.

VII.4.2 Procedures for Processing a Change

Assuming that all the necessary pre-processing has taken place, it then becomes time to start the formal processing of the change request within NAVAIR. The basic procedure is illustrated in Figure VII-2. Once the Class-Desk has analyzed the need for the change and determined the kind of change that is needed, in general terms, he then formally requests an ECP from the contractor or field activity. NOTE: It takes time and money to prepare a proper ECP, so such requests should not be issued without a fair certainty that the resulting change will be implemented. What this means is that he should have determined, prior to issuing the request, that funds are available and all concerned are for the change, so long as the resulting ECP is an adequate engineering answer to the problem.

It should be pointed out that ECPs are classified according to urgency, with target times for processing through to the ACC3. Those classifications and target times are as follows:

Emergency - 24 hours

Urgent - 15 calendar days

Routine - 45 calendar days

Reference will be made from now on to a Change

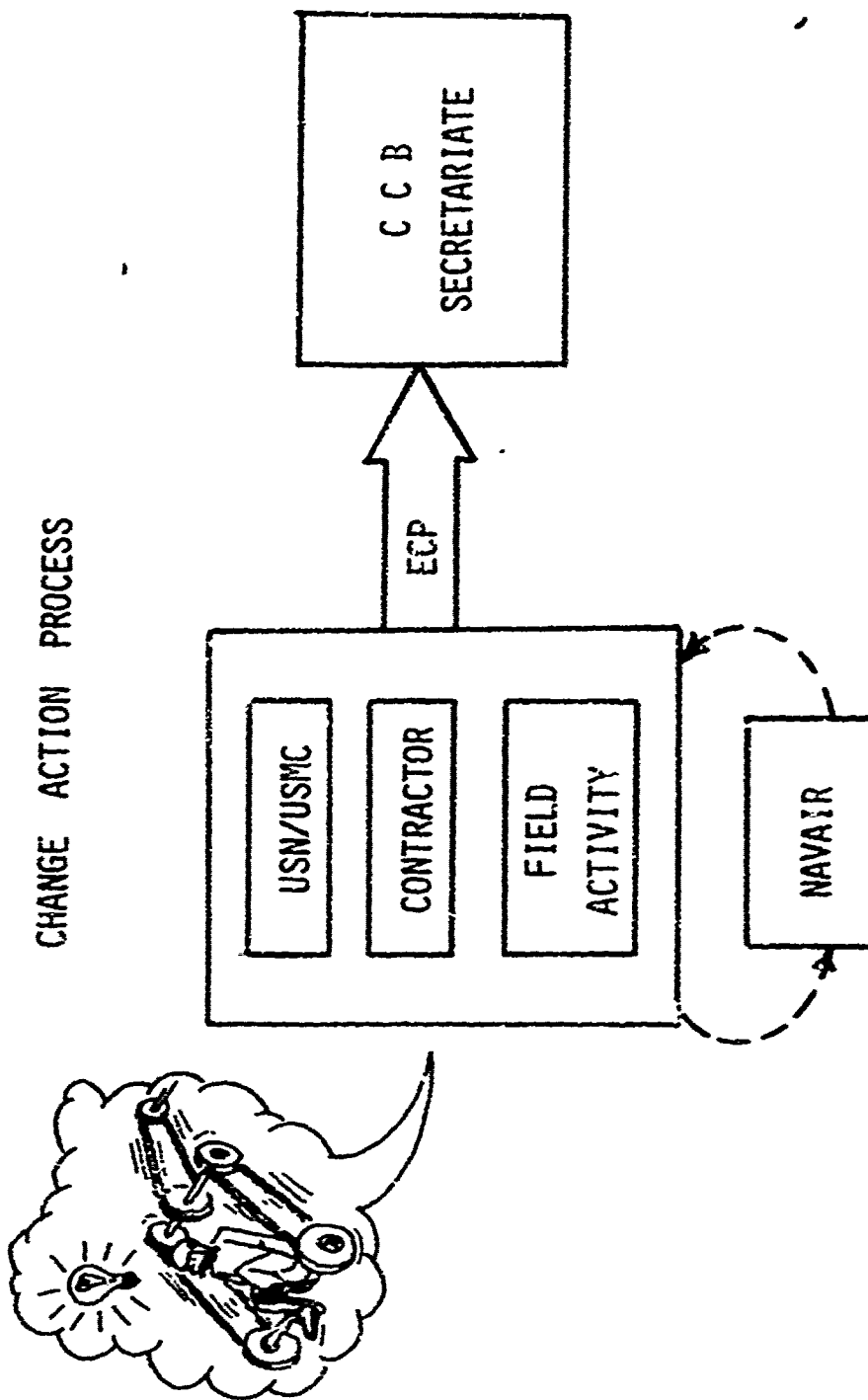


FIGURE VII-2

Request, which is the document that proceeds through NAVAIR on the approval process. It is NAVAIR Form 13050/2, and contains all the information, culled from the ECP, necessary to describe the effectivity, justification, direction, and funding for the change, together with room for signatures of concurring and approving authorities. It should be noted again that each milestone that is reached in the processing of a change is noted on the Modification Status Report described earlier.

RECEIPT OF FORMAL ECP: Recall that all the pre-processing led up to a tentative decision to "go" for the MOD. Those decisions resulted in preparation by the contractor of a formal ECP. Seventeen copies of the MOD are submitted to the CCB Secretariat for distribution within NAVAIR. Advance copies are concurrently sent to the Class-Desk, the cognizant functional division, AIR-04, the FMA, and AIR-534, if GSE is affected. The official copies are distributed by the Secretariat, initiating the procedural phases of the approval process.

DECISION MEMORANDUM: Once the MODs are distributed, it is intended that a quick look be taken to determine whether the MOD will be processed or not. Generally speaking, that decision has already been made in the pre-processing stage, but it is wise to look at it to ensure that the formal MOD is essentially like the earlier submitted proposed MOD. The decision to proceed is documented in a Decision Memorandum signed and issued by the FMA. Policy dictates that the

Decision Memo be issued within five days of receipt of the MCD. The decision memo is prepared by the Class-Desk for submission to the PMA. After the PMA has signed it, the Class-Desk gets it distributed to the correct people. The decision memo contains at least the following information:

- a. The decision to process the change
- b. A prospective date for presentation of the change request to the ACCB
- c. Production effectivity and/or retrofit schedule
- d. Revision or affirmation of the contractor-assigned urgency classification
- e. The CSIP number, if applicable.

If the decision is to reject the MCD, then the PMA and NAVPRC are notified in order to stop any work proceeding there.

PREPARATION AND ROUTING OF CCB CHANGE REQUEST (Form 13050/2):

At the same time he prepares the Decision Memo, the Class-Desk makes up a folder for each change. In the folder are the ECP, a cost and funding summary, any other data pertinent to the change, and a partially filled in CCB Change Request Work Sheet. By completing part of the Work Sheet before sending it on, the Class-Desk is doing some of the functional division's work, but on the other hand, he will be filling in information that he is more familiar with, so there is an overall saving of time in the process. Once this is done, the folder is sent to the cognizant functional division for completing AIR-05's part of the Change Request. The main

thing the cognizant engineer does is to fill out the justification and effect on weight and performance guarantees. It is then signed by his Division Director in a concurring block and forwarded to other concurring offices. Note that there are special requirements for review by the Safety Office, the GSE Division, and in those cases requiring it, by the Human Factors Branch. Finally, the completed Change Request (now in mat form, prepared by the functional division) gets back to the Class-Desk. At this time, the AIR-04 input should arrive and the Class-Desk should review their data and integrate it with the Change Request. It is then ready for submission back to the CCB Secretariat. This should be accomplished prior to 1100 on Friday preceding the scheduled CCB meeting. The Secretariat assigns a number to the Change Request and places the Class-Desk's Change Request on the agenda for consideration at the following Thursday's CCB meeting.

THE ACCB: When the date for the ACCB meeting arrives, the Class-Desk should attend. Since the meetings are held each Thursday, and the agenda are published by Monday of the week, he can tell whether he has any Change Requests due at the board that week, and plan accordingly. If, however, some unforeseen and unavoidable conflict does arise, ensure that at least the cognizant engineer from the functional division is at the Board for presentation of the Change Request.

VII.5 Exceptions to the Above Procedures

As can be inferred from the above description of the change process, the procedures are somewhat cumbersome and it takes considerable time from the time a need is expressed until it is answered by a change to the airplane or system. Also, the procedures seem almost too troublesome for minor changes. So there are exceptions allowed in order to cut through (rather than circumvent) the morass of procedural red tape. These exceptions are Interim Airframe Changes and RAMECS (Rapid Action Minor Engineering Changes).

VII.5.1 Interim Airframe Changes (IAPC) (See NAVAIRINST 5215.8)

In cases where safety of flight is concerned, or other operational urgencies dictate, and an inspection process is not the immediate answer to those problems, some design change may be required. In such cases the processes described above are contracted into a short time span. If the problem solution requires a design change and installation of a kit, then it can be achieved through issuance of an interim change. Essentially, the contractor or field activity designs the change and provides the kit on a priority basis. The interim change directive itself is provided by NAVAIR, through the cooperative action of the Class-Jesk and his AIR-04 and AIR-05 colleagues. It need not go through all the stages of concurrence indicated in the sections above, but must have the concurrence of the chairman of the ACCB. Such concurrence may be given by telephone if necessary, although generally the chairman would prefer to have a look at what

is going out to the fleets. The interim change is prepared in accordance with the instruction and issued in message form. In all cases, the interim change must be followed up with a formal change which follows the normal process.

VII.5.2 RAECS (See NAVAIRINST 5215.10)

The RAECS system was designed to provide a mechanism for achieving changes of a minor nature that are conceived and designed by fleet personnel. As often happens, experience in operational use of the airplane or system will indicate some improvements, or corrections of design, are needed to make the system easier to operate. Usually, maintenance personnel will come up with a design that solves the problem, or provides the improvement. In the interests of configuration control, and to make all the aircraft look alike so that a pilot is not faced with learning a new cockpit each time he gets into one, the RAECS system is imposed as a discipline on this type of change. The system essentially permits the prototyping of one aircraft with the change, for evaluation, and if the evaluation was successful, preparation of a message-type technical directive (change) for processing in order to get the change installed in all aircraft of that kind. The review process for such a change is shortened considerably, so that immediate benefits can be gained from the efforts expended by the squadron personnel, while still providing for configuration control. To qualify as a RAECS, the change must:

- a. be confined to a simple change that can be

easily and rapidly incorporated and that does not warrant extensive technical review or work effort;

b. be authorized for organizational or intermediate level implementation and not require more than eight man-hours per installation;

c. use only standard stock items and raw material available through the supply system, or items manufactured by a NARF through customer service (Total value shall not exceed \$100 per installation and local open purchase items are not considered available through the supply system);

d. be complied with normally not later than the next calendar/phase inspection, or next induction of the item into an intermediate maintenance activity;

e. be coordinated through, and agreed to, by each affected controlling custodian, weapon system manager and cognizant field activity;

f. not involve the development, fabrication, procurement, or stocking of retrofit kits;

g. not be used to amend or supplement an existing formal technical directive;

h. not generate a requirement for additional or new ground support equipment;

i. not generate a change to GSE, unless such a change can also be processed under the RALEC system;

j. not affect operational or avionics automatic test equipment programs and/or tapes; and

k. not involve changes to general purpose elect-

ronic test equipment under the cognizance of NAVELEX.

VII.6 The OSIP (Operational, Safety Improvement Program)
(See NAVAIRINST 4000.3)

The mechanism for funding changes to in-service, out-of-production aircraft is the OSIP program. The Secretary of the Navy restricts the modification and modernization of in-service aircraft to that required for safety of flight and combat effectiveness. The OSIP program as promulgated by CNO provides an orderly, planned method of programming and budgeting for these evolutions. It enables the submission, review, evaluation, approval and budgeting of prospective OSIP items. Figure VII-3 aptly shows the purpose of the OSIP funds. The various appropriations and budget activities involved in the OSIP program are indicated in NAVAIR NOTICE 4000.

VII.6.1 OSIP Procedures

As indicated above, the OSIP program requires a structured procedure for planning, justifying and budgeting for proposed improvements. The bulk of OSIP funds is achieved and administered through that structured program. There is provision, however, for a certain amount to be set aside each year for unplanned, urgent safety of flight items, indicated by a small pot on Figure VII-3. These funds are administered by AIR-1041 and use of them must be justified to AIR-1041 prior to processing any charge requests citing them. The NAVAIR planning process is directed by the covering instruction and an annual "call" for items by means of a

NAVAIRNOTE 4000. The steps are indicated in calendar sequence on Figure VII-4.

PRE-PLANNING: Usually the "call" arrives at an inopportune time, leaving insufficient time to do a good job of preparing an CSIF justification and item submission. It is compounded by the necessity for review along the way. So it is a good idea to start the planning process in advance of any "call" which might be issued. This critical initial step should be taken in early summer, and consists of getting together with the RIA to view all the possibilities and decide what changes to forward. The next step in the pre-planning process is to inform the appropriate functional divisions of the decisions reached at the early summer meeting and to request them to get on with the processing and staffing of the CSIF items.

PROCESSING OF PROSPECTIVE CSIF ITEMS: Although the items assigned to the functional divisions should be prepared in advance, it may turn out that they will not be submitted until the "call" has been issued by AIR-1041 (official) or by AIR-510 (advance). At any rate, when such a call is issued, "pressure" usually needs to be applied to functional divisions to get the forms in. There is considerable work to be done in connection with the CSIF format and it shouldn't wait too long. The cost figures (preliminary estimates) can be gained through dialogue with the appropriate contractors, who often have performed studies in support of prospective CSIF items. The Class-Deck should try to get a preliminary

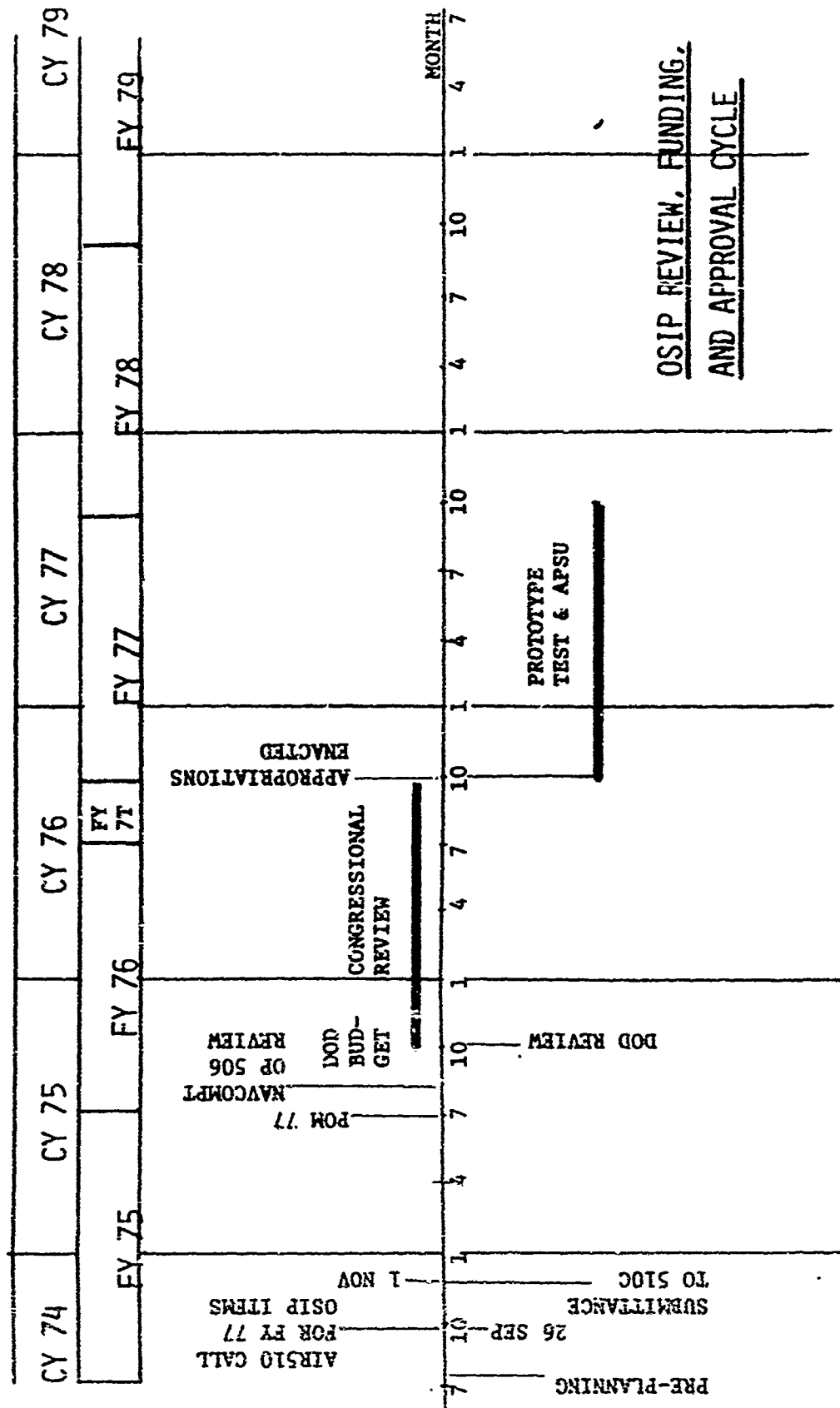


FIGURE VII-4

input from the functional divisions at least two weeks in advance of the deadline. This will indicate the state of progress and will allow him time to put on pressure where needed. Once he has the completed forms, they are submitted to the AIR-510 division OSIP coordinator, who also insists that AIR-04 and AIR-534 inputs are included, and thence to AIR-1041 where they are integrated with all other aircraft submissions for a total NAVAIR package which is then submitted to OPNAV (OP-506) for a coordinated OPNAV review prior to placing the program into the POM (Program Objectives Memorandum) planning process.

FOLLOW-UP SUPPORT: The Class-Desk may be called upon several times after original submission of the OSIP list for additional information in justification of the items for his airplane. In May, the POM will be issued, indicating which of his items has survived that far in the planning process. Sometime later, in August, NAVCOMPT and OP-506 representatives will come to NAVAIR to go over the list to determine whether the item is still justified or not. In addition, they are particularly interested in the validity of the cost figures submitted with the OSIP item. Once this phase is over, the entire approved list is submitted to DCD and thence to Congress in the annual budgeting cycle. The Class-Desk may still be called on any given item, for information in justification of the change. Finally, when the appropriations act is signed, and his item(s) has survived, he can start on the design and long-lead phases of the program.

VII.6.2 Contingencies

The above process is extremely time-consuming between the time a need is derived and the solution. However, the program does work. There are occasions where a need arises that does not fit the safety-of-flight category but which cannot wait for the CSIP program to fund. There are a couple of ways around the obstacle to keep in mind should the need arise. The first is the use of "laundered" money, meaning funds which were intended for other purposes and in other budget activities which goes through a conversion process to produce APN-5 or APN-6 funds as necessary. This is a relatively unusual procedure and should probably be not advertised too widely. However, when the need does arise, the Class-Desk should seek the advice of the money people in CP-605. Another is the reprogramming of approved CSIP funds. This is accomplished by submitting from NAVAIR (AIR-1041) a request to CPNAV for such action and gaining their approval.

Chapter VIII

SUMMARY

In conclusion, one can readily note the Class-Desk's key position in the PMA--AIR-510 interface. His duties invariably carry a great deal of responsibility. Therefore, mainly out of necessity, the Class-Desk must exhibit personal qualities and capabilities that will enable him to maintain control at all times.

Inasmuch as the greatest burden he faces is correspondence, he must be versed to the point of having the capability to explicitly express himself in writing. He needs to be able to grasp the technical essence of a concept or design, and to portray this essence in a clear and well-defined manner to the various agencies performing the work.

Inasmuch as he constantly deals with people, he needs to possess the ability to handle others in whatever situation may arise. He must be firm and persuasive when the occasion requires, both inquisitive and a good listener when faced with a subject where he has little knowledge, and helpful when he feels he can contribute. This requirement can be aptly summarized in a basic ability to get along well with people.

As a general rule, a Class-Desk Officer is selected because of his strong background of operational mission flight experience in a particular type of aircraft. In addition, he usually has a solid engineering or maintenance background

to apply to his tasks. This unique combination of talents make him a prominent driving force within the Command.

Considered to be a lead Navy design engineer for his aircraft, he is in a position to save considerable amounts of the taxpayers dollars. The demands that are placed on the Class-Desk Officer often task his patience and skill; yet his decisions and follow-on successes frequently lead to his goal the main reward being his own personal satisfaction.

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